

## **1.1 STATE PROFILE**

### **INTRODUCTION**

Ohio was the 17<sup>th</sup> territory to become part of the United State of America with its induction on March 1, 1803. Ohio is an Iroquoian word (Senecan dialect) meaning, 'beautiful river.' Located in the north central region of the United States, Ohio was home to eight of the forty-three people whom have held the office President of the nation including William Henry Harrison, Ulysses Simpson Grant, Rutherford Birchard Hayes, James Abram Garfield, Benjamin Harrison, William McKinley, William Howard Taft, Warren Gamaliel Harding

### **GEOGRAPHY**

The state is divided into two broad regions loosely following a diagonal line running from the south-western corner to the north-eastern corner. The portion of the state above the line was repeatedly inundated by glaciers. The result is a generally flat or gently rolling topography with layers of glacial sediments conducive to agriculture and large population centers. One notable exception is a region in west central Ohio where an outcropping of large hill exists. The portion south of the line consists of the foothills to the Appalachian Mountains, a weathering range located south and east of Ohio.

Water distribution across the state is also regional. The glaciers which altered the land also impacted Ohio's water system. Lake Erie, which encompasses the majority of Ohio's northern boarder, was created by and subsequently filled with water from glaciers. Rivers systems in approximately the northern third of Ohio flow north into Lake Erie. Major rivers from west to east include the Maumee, Middle Branch, Sandusky, Huron, Black, Cuyahoga and Grand. The remainder of the waterways in the state flow south into the Ohio River. Significant rivers include the Great & Little Miami, Scioto, Hocking and Muskingum along with the Ohio itself.

Ohio borders the states of Pennsylvania, Kentucky, West Virginia, Indiana and Michigan while sharing an international border with the Canadian province of Ontario. A large portion of the state's border is associated with bodies of water including West Virginia and Kentucky along the Ohio River and Ontario near the center of Lake Erie.

Ohio covers 40,952 square miles of land. Land use percentages range from a high of 43.53 for cropland to a low of 1.30 for wetlands (See Table 1.1.a)

**Table 1.1.a**

<b>Land Use/Land Cover</b>	
<b>Type</b>	<b>Percentage</b>
Urban	9.17
Cropland	43.53
Pasture	7.81
Forest	37.12
Open Water	0.92
Wetlands	1.30
Bare/Mines	0.16

From the perspective of taxable land value, the distribution varies significantly from land use. Ohio has over 161 billion dollars of residential inventory and agriculture has nearly 9 billion (See Table 1.1.b)

**Table 1.1.b**

<b>Taxable Value Inventory</b>	
<b>Type</b>	<b>Value (in Billions)</b>
Residential	161.27
Agriculture	8.80
Industrial	9.46
Commercial	38.96
Mineral	0.13

**DEMOGRAPHY**

The last decennial US census placed Ohio’s population at 11,353,140 with a projected population in 2030 of 12,317,610. The Ohio Department of Development, Office of Strategic Research has developed fact sheets for the state and each of Ohio’s 88 counties. Based on statewide data, the largest racial group in Ohio is White followed by African-American (See Table 1.1.c)

**Table 1.1.c**

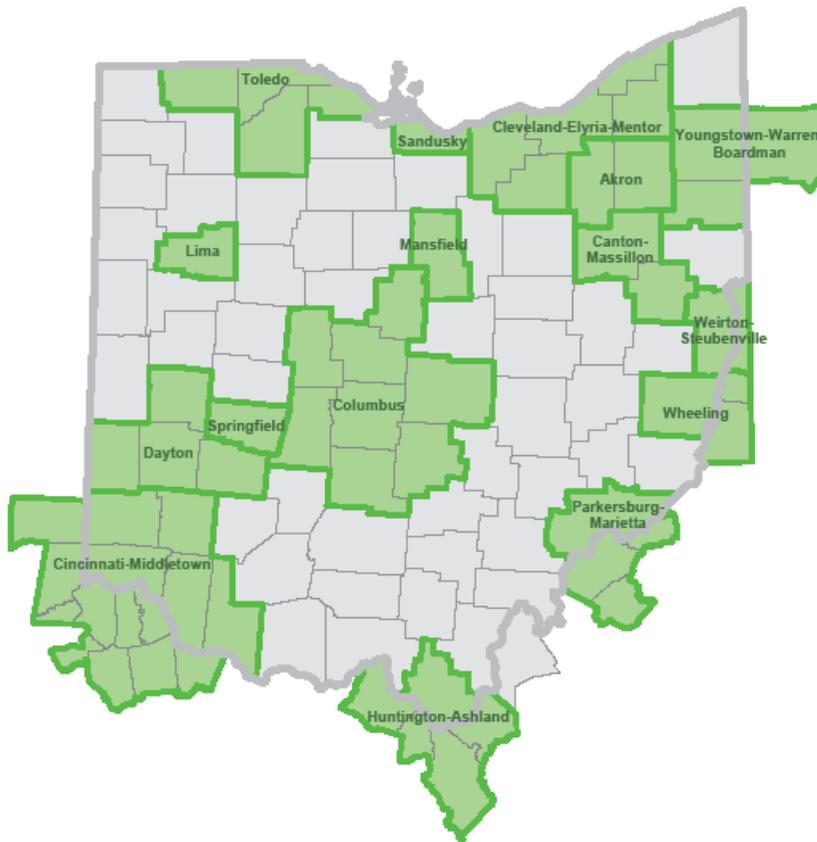
<b>Population</b>		
<b>Race</b>	<b>Count</b>	<b>Percentage</b>
White	9,640,523	84.9
African-American	1,288,359	11.3
Native American	26,999	0.2
Asian	132,131	1.2
Pacific Islander	2,641	0.0
Other	89,149	0.8
Two or More Races	173,338	1.5
Hispanic (any race)	213,889	1.9

There are a total of 1,816,058 persons falling into minority categories making up 16 percent of the population. The median age of Ohioans is 36.2 years.

Ohio is home to three large metropolitan statistical areas (MSAs) located around the cities of Cleveland (2,148,143), Columbus (1,612,694) and Cincinnati (2,009,632) based on the 2000 census. There are an additional four notable moderate sized MSAs located around the cities of Akron (694,960), Dayton (843,835), Toledo (659,188) and Youngstown (602,964), see Map 1.1. a. Combined, these MSAs account for 8,571,416 people or 75 percent of the state's population. The central counties for these MSAs account for 1,065,355 African-Americans or 83 percent of the state population. Individual county populations range from a low of 12,806 in Vinton County located in south-east Ohio to a high of 1,393,978 in Cuyahoga County which is the center of the Cleveland MSA.

**Map 1.1.a**

**Ohio  
Metropolitan Statistical Areas**



Areas identified by 'principal' city.

Federal agencies often use 'Statistical Areas' as geographic boundaries for program eligibility or for funding priorities.

Source: OMB Bulletin # 04-03  
Prepared by: OSR/ODOD March 2004

Source: <http://www.odod.state.oh.us/research/files/g115.pdf>

Ohio contains a federally and state recognized demographic region known as Appalachia. In 1965, the U.S. Congress identified counties in thirteen states along the Appalachian Mountain Range as part of the Appalachian Regional Commission. The Governor's Office of Appalachia represents the interests of the 29 counties comprising East Central, Southeast and Southern Ohio (See Map 1.1.b).

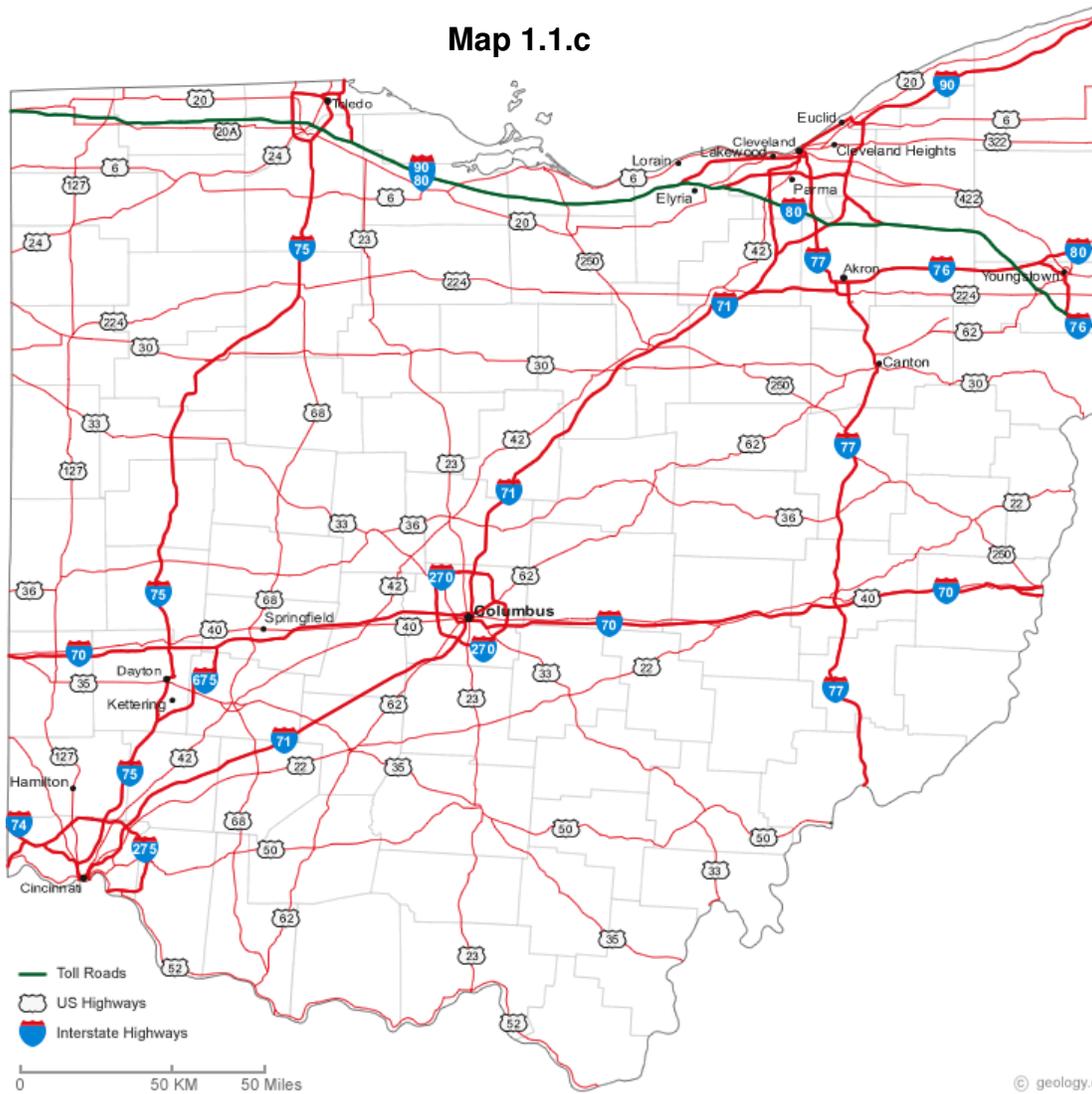


Source: <http://www.odod.state.oh.us/research/files/s0/appalachia.pdf>

Appalachia's population in 2000 was 1,455,313 of which 95.9 percent is white. In recent history, Appalachia has faced significant economic and developmental challenges.

## TRANSPORTATION

Ohio has been dubbed the crossroads connecting the northeastern US with the Midwest (See Map 1.1.c). The map only represents federal highways and interstates. Three major east-west interstates (I-70, I-80 and I-90) traverse the state. Two north-south interstate (I-75 and I-77) run the full length of the state.



Source: <http://geology.com/state-map/ohio.shtml>

## LAND USE

### REGIONAL LEVEL ANALYSIS

Ohio has elected to address hazard mitigation planning on three regions which have similar geographic, socio-economic and land-use characteristics. Still, there are a few anomalies, which do not reflect these general trends for the host region. For example, the region as a whole may be experiencing population growth, but some of the counties within that region may be experiencing significant population decline due to out-migration. Analyses of these types of differences are a necessary process in the development of the risk and vulnerability assessments for each hazard as well as for the development of the hazard mitigation strategies.

#### REGION 1

Region 1 is characterized by largely rural, largely agricultural counties with flat to gently rolling topography. It is the northwest portion of the state.

#### General Population

Region 1 experienced modest population increases between 1980 and 2000, but the average population increase between these two dates (1.18%) was less than half that of the state as a whole (4.7%). Regional growth is expected to continue at a rate of about 0.8% (see Table 1.1.d).

All communities did not share same increase in growth even though the region as a whole has experienced an increase in population (see Table 1.1.e). Six of the ten largest communities experienced population decreases between 1990 and 2000 with Lima (Allen County) having the largest decrease at -13.64%. The final four largest communities saw an increase. The most significant, with an increase of 11.45%, was in Troy (Miami County).

**Table 1.1.d**

Region 1 Population Trends 1950-2030		
YEAR	POPULATION	% CHANGE 1980-2030
1980	2,108,373	
1990	2,109,289	(+) 0.04%
2000	2,159,494	(+) 2.32%
2010 (projected)	2,185,992	(+) 1.21%
2020 (projected)	2,199,559	(+) 0.61%
2030 (projected)	2,214,691	(+) 0.68%

*Source: Ohio Department of Development*

**Table 1.1.e**

<b>Region 1: Percent Growth in Large Citys</b>			
<b>LARGEST AREAS</b>	<b>1990</b>	<b>2000</b>	<b>% CHANGE</b>
Toledo	332,943	313,619	(-) 6.16%
Springfield	70,487	65,358	(-) 7.84%
Lima	45,549	40,081	(-) 13.64%
Findlay	35,703	38,967	(+) 8.37%
Marion	34,075	35,318	(+) 3.51%
Bowling Green	28,176	29,636	(+) 4.92%
Sandusky	29,764	27,844	(-) 6.89%
Troy	19,478	21,999	(+) 11.45
Sidney	18,710	18,135	(-) 3.17%
Tiffin	18,604	18,135	(-) 2.58%

*Source: Ohio Department of Development*

**Special Populations**

The number of people within the special populations category generally increase with the size of the county or community. These special population groups include: infant children, elderly, non-English speaking populations, convalescing populations, assisted living populations, as well as inmates. The number of people with disabilities in the region’s two largest counties, Lucas and Clark, is higher than most counties in the region.

***Convalescing and Assisted Living Populations***

There are a number of facilities in Region 1 that house special or disabled populations. They include 206 nursing homes and 54 hospitals with a total of 27,999 beds. There are also two mental hospitals within the region. Although these facilities have their own contingency plans, they coordinate with state, county and city hazard mitigation planning efforts.

***Inmate Populations***

There are 7 correctional facilities in Region 1 including 2 prisons in Allen County, 2 in Madison County, 2 in Marion County, and 1 in Lucas County. The combined inmate population in these facilities totals 9,316.

***Ethnic / Poverty Level Considerations***

Ethnicity, poverty levels, and the ability to comprehend the English language vary throughout the region. Caucasians comprise approximately 94% of the region’s ethnic mix compared to the state’s average of 85%. The region’s largest minority (African-American) exceeds the state average of 11.5% in Allen (12.2%) and Lucas (17%) counties. African-Americans across the region as a whole comprise about 2.97% of the population (see Table 1.1.f).

**Table 1.1.f**

<b>REGION 1 ETHNIC PROFILE</b>		
<b>POPULATION BY RACE</b>	<b>NUMBER</b>	<b>PERCENT</b>
<b>Total Population</b>	<b>2,159,494</b>	<b>100%</b>
<b>Total Minority</b>	<b>114,179</b>	<b>5.30%</b>
Caucasian	2,029,924	93.9
African-American	38,708	1.80%
Hispanic	25,913	1.20%
Native American	4,319	0.20%
Asian	10,797	0.40%
Pacific Islander	388	0.01%
Other	24,739	1.10%
Two or More Races	31,615	1.40%
<i>Source: Ohio Department of Development</i>		

The Hispanic population encompasses the region’s third largest ethnic group at 2.3% of the population. The main cores of Hispanic inhabitants are located in Defiance (7.2%) and Sandusky (7%) counties, which also have the largest number of foreign language speakers. Other ethnic groups in the region total less than 1% of the population. Poverty rates were highest in Lucas (13.9%), Allen (12.1%), Clark (10.7%) and Fayette (10.1%) counties. Three of these counties (Allen, Clark and Lucas) also have the largest ethnic minority populations.

**Age Profiles**

The median age group in Region 1 is 35.7. The age population categories, which require the most care after a disaster event are the “under 5 years of age” and over “65 years of age” and are distributed consistently throughout the region. The percentage of children under the age of 5 is about the same throughout Region 1 counties but range from a high of 7.6% of the population in Shelby County to a low of 5.2% in Ottawa County. The percentage of people 65 years of age and older is also consistent with percentages ranging from a low of 10.9% in Madison County to a high of 15.4% in Wyandot County (see Table 1.1.g).

**Regional Economy**

The economy in Region 1 is firmly based in manufacturing both in terms of work force and wages. Other economic sectors ranked in terms of workforce and wages include (2) State and Local Government, a (3) Health Care and Social Assistance, (4) Retail Trade and (5) Accommodations and food services. An economic downturn in manufacturing from 2000 to 2001 caused concern, but it still remains the region’s principal economic sector.

Regional unemployment rates were 4.1% in 2000 and 5.7% in 2002. The highest median incomes were in Defiance (\$44,938), Shelby (\$44,507), Wood (\$44,442), and Madison (\$44,212) counties. Several other counties were slightly lower (see Table 1.1.i).

**Table 1.1.g**

Region 1 Population by Age						
COUNTY	Population (2000)	Under 5 Years Old	21 yrs. +	65 yrs. +	85 yrs. +	Median Age
Allen	108,473	7,258	75,005	15,366	1,293	36
Auglaize	46,611	3,164	31,970	6,692	947	36
Champaign	38,890	2,544	27,227	4,906	612	37
Clark	144,742	9,480	101,922	21,262	2,593	38
Clinton	40,543	2,878	27,787	4,932	573	35
Crawford	46,966	3,095	33,507	7,139	834	38
Defiance	39,500	2,787	27,222	2,083	606	36
Darke	53,309	3,570	37,416	8,132	1,156	37
Erie	79,551	4,809	57,129	12,383	1,400	40
Fayette	28,433	1,906	20,207	1,705	468	38
Fulton	42,084	3,019	28,637	5,353	717	36
Hancock	71,295	4,827	49,662	3,740	1,274	36
Hardin	31,945	2,042	21,623	4,124	525	33
Henry	29,210	1,946	19,971	1,655	552	36
Huron	59,487	4,452	40,409	7,354	819	35
Logan	46,005	3,169	32,029	6,395	687	37
Lucas	455,054	31,180	315,838	59,441	7,307	35
Madison	40,213	2,510	28,632	4,383	490	36
Marion	66,217	4,001	47,598	8,857	983	37
Morrow	31,628	2,061	21,824	3,624	402	36
Mercer	40,924	2,975	27,251	5,935	665	36
Miami	98,868	6,325	69,643	13,096	1,486	38
Ottawa	40,985	2,150	30,077	6,710	729	41
Paulding	20,293	1,334	14,022	2,555	287	36
Preble	42,337	2,682	29,774	5,573	541	38
Putnam	34,726	2,541	22,966	4,621	626	35
Sandusky	61,792	4,016	43,315	8,942	1,160	37
Seneca	58,683	3,664	40,430	8,251	903	36
Shelby	47,910	3,639	32,420	5,849	800	35
Van Wert	29,659	1,887	20,754	4,592	611	38
Williams	39,188	2,515	27,381	5,438	732	37
Wood	121,065	7,065	81,362	13,334	1,650	33
Wyandot	22,908	1,483	16,132	3,537	501	37
Region Median						37.6

*Source: OSU Extension Data Center*

The median annual income for Region 1 households is \$41,204, which exceeds that of the State of Ohio (\$40,204). The regional median income is greater, but 19 of its 33 counties are below the state mean (see Table 1.1.j). There are 8% of the people residing in Region 1 that live below the Ohio poverty level, which is not a high percentage, considering that the state average is about 10.6%. The Region 1 counties that have comparatively high numbers of people living below the poverty level include: Lucas (13.9%), Hardin (13.2%), Allen (12.1%), Crawford (10.4%) and Fayette (10.1%). These counties may warrant special consideration in pre- and post-disaster planning.

**Table 1.1.h**

<b>REGION 1 EMPLOYMENT AND WAGES BY SECTOR</b>				
<b>Sector</b>	<b>Average Annual Employment</b>		<b>Total Wages (Thousands of Dollars)</b>	
	<b>2000</b>	<b>2001</b>	<b>2000</b>	<b>2001</b>
Manufacturing	260,633	245,059	\$10,634,018	\$9,986,163
State / Local Government Services	122,949	125,526	\$3,764,211	\$4,022,845
Health Care / Social Assistance	98,862	101,658	\$2,841,026	\$3,041,465
Retail Trade	117,691	115,028	\$2,155,001	\$2,194,993
Accommodations / Food Service	74,568	74,148	\$722,296	\$726,965

*Source: Ohio Department of Development*

**Table 1.1.i**

<b>Region 1 Unemployment Rate</b>					
<b>Labor Force</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Employed	1,013,300	1,070,000	1,053,900	1,070,100	993,400
Unemployed	51,900	50,800	47,600	52,800	67,400
Unemployment Rate	4.6	4.7	4.1	4.6	5.7

*Source: Ohio Dept. of Development*

## Housing

Year 2000 statistics indicate that there are approximately 898,925 housing units in Region 1, about 68,451 (7.6%) are vacant (see Table 1.1.k). Ottawa County has a surprisingly high number of vacant units (9,058) considering that its total number of units is about 25,532. The reasons for such a rate are unknown.

More than half of the houses in Region 1 were constructed before the implementation of the National Flood Insurance Program was implemented, which has important mitigation implications. It is likely that a majority of homes built in the region's floodplains do not provide adequate flood protection.

**Table 1.1.j**

<b>REGION 1 HOUSEHOLD INCOME IN 1999</b>		
	<b>Number</b>	<b>Percent</b>
Total Households	831,976	100%
Less than \$10,000	68,836	8.3
\$10,000 - \$19,999	107,492	12.9
\$20,000 - \$29,999	118,720	14.3
\$30,000 - \$39,999	112,606	13.5
\$40,000 - \$49,999	99,910	12
\$50,000 - \$59,999	85,423	10.3
\$60,000 - \$74,999	94,263	11.3
\$75,000 - \$99,999	81,395	9.8
\$100,000 - \$149,999	44,473	5.3
\$150,000 - \$199,999	9,217	1.1
\$200,000 or more	9,641	1.2
Source: Ohio Dept. of Development		

**Table 1.1.k**

<b>Region 1 Housing by Type</b>		
<b>Housing Units</b>	<b>Number</b>	<b>Percent</b>
Total Units	899,951	100%
Occupied Units	831,500	92%
Owner Occupied	603,356	67%
Renter Occupied	228,144	25%
Vacant Housing Units	68,451	8%
Source: Ohio Dept. of Development		

**Transportation**

Region 1 has a well-developed transportation system, despite the fact that 14 of its 33 counties do not have interstate highways. State and US Highway systems coupled with extensive rail networks meets ground transportation needs for residents in Region 1. Every county in Region 1 has at least 1 commercial airport. Four lake-oriented counties have ports (see Table 1.1.l).

**Table 1.1.I**

<b>REGION 1 TRANSPORTATION SYSTEMS</b>						
<b>Counties</b>	<b>Interstate Highways</b>	<b>US Highways</b>	<b>Rail Line (Number)</b>	<b>Principal Airport (Number)</b>	<b>Local Airport (Number)</b>	<b>Lakeports (Number)</b>
Allen	X	X	4		1	
Auglaize	X	X	6		1	
Champaign	X	X	3		2	
Clark	X	X	4		2	
Clinton	X	X	2		3	
Crawford	0	X	4		1	
Darke	0	X	2		1	
Defiance	0	X	2		1	
Erie	X	X	2		2	3
Fayette	X	X	4		1	
Fulton	X	X	2	1	1	
Hancock	X	X	3		2	
Hardin	0	X	4		2	
Henry	0	X	3		1	
Huron	0	X	4		2	
Logan	0	X	3		1	
Lucas	X	X	7	1		1
Madison	X	X	2		1	
Marion	0	X	4		1	
Mercer	0	X	1		1	
Miami	X	X	1		2	
Morrow	X	X	2		1	
Ottawa	X	X	2		6	
Paulding	0	X	2			
Preble	X	X	1			
Putnam	0	X	3		3	
Sandusky	X	X	3		2	
Seneca	0	X	5		4	
Shelby	X	0	3		1	
Van Wert	0	X	3		1	
Williams	X	X	3		1	
Wood	X	X	4		4	
Wyandot	0	X	3		1	

*Source: Ohio Department of Development*

## **REGION 2**

Region 2 is defined by the I-71 corridor and contains all of Ohio's largest cities: Cleveland, Columbus, and Cincinnati. Geographically, it is also, in many respects, the boundary between the previously glaciated portion of the state, and the unglaciated Appalachian foothills.

### **General Population**

The population in Region 2, according to the Ohio Department of Development, was 7,697,425 in 2000. The Region has experienced modest, but steady, population growth since 1980. The regional growth rate between 1990 and 2000 was about 4.9%, which is similar to the State of Ohio's rate of 4.7% for the same period. Regional growth rates are expected to increase until 2020, when the projected rate declines to (-) 95%. The projection differs from the projected growth rate for the State of Ohio by approximately 2.9%.

The counties in Region 2 do not share regional growth trends. Seven of the region's 10 largest communities registered a population decline in 1990 and 2000. The minus (-) 9% decline in Cincinnati (Hamilton Co.) contrasts with that of Columbus (Franklin Co.), which gained 11% during the same period (see Table 1.4.4.1.b). Rapid population gains or declines can have an effect on hazard mitigation strategies, but due to the relatively recent history of mitigation projects and the impact of Region 2 population changes, the effect it has on mitigation activities is unknown.

### **Special Populations**

Region 2 shares the same special population concerns as Regions 1 and 3. The large number of people warranting special consideration coincides with the region's most populous areas. Nine of Ohio's ten most-populated counties are in Region 2.

Emergency managers and mitigation planners must pay particular attention to counties having large numbers of disabled people (e.g., Cuyahoga, Hamilton, and Montgomery counties), large numbers of people living below the state's poverty level (e.g., Cuyahoga, Mahoning, Ashtabula, and Montgomery counties), and those with limited English capabilities (e.g., Cuyahoga, Geauga, and Wayne counties). The age of the population is also an important factor. Each county is unique and must be treated accordingly.

### ***Convalescing and Assisted Living Populations***

There are a large number of hospitals and nursing homes in Region 2. They account for over 92,000 beds. The average availability of these beds is yet to be determined, but they figure prominently in pre- and post- disaster considerations. There also are 6 mental hospitals within the region. Although these facilities have their own contingency plans, they must be coordinated with state, county and city hazard mitigation planning efforts.

**Table 1.1.m**

<b>Region 2: Population Trends 1980-2030</b>			
<b>YEAR</b>	<b>POPULATION</b>	<b>%CHANGE</b>	<b>1980</b>
			<b>2030</b>
1980	7,283,925		
1990	7,332,975	(+)0.67	
2000	7,697,425	(+)4.9	
2010 (projected)	9,043,250	(+)17.4	
2020 (projected)	8,959,300	(-)0.95	
2030 (projected)	9,275,575	(+)3.5	

*Source: Ohio Department of Development*

**Table 1.1.n**

<b>Region 2: Largest Areas</b>			
<b>LARGEST AREAS</b>	<b>1990</b>	<b>2000</b>	<b>%CHANGE</b>
Columbus	632,270	702,132	(+)11.0
Cleveland	505,616	478,403	(-)5.4
Cincinnati	364,040	331,285	(-)9.0
Akron	223,019	217,019	(-)2.7
Montgomery	182,044	166,179	(-)8.7
Youngstown	95,706	82,076	(+)4.0
Canton	84,161	80,806	(-)4.0
Lorain	71,245	68,652	(-)3.6
Hamilton	61,368	60,960	(-)0.7
Mentor	47,358	50,278	(+)6.2

*Source: Ohio Department of Development*

***Inmate Populations***

There are 12 prisons within Region 2 with a total inmate population of about 16,000. Each prison doubtlessly has an operational plan that addresses a variety of circumstances. The challenge then is coordination with prison officials. The large inmate population and associated special considerations cannot be ignored.

***Ethnic / Poverty Level Considerations***

The minority population in Region 2 is about 10.7% of the regional total (7,697,425) (Table 1.1.o). African-Americans are the largest minority (7.7%) followed by Hispanic (1.5%), Asians (1%) and Native Americans (0.2%). Their concentrations are within the largest communities may be linked to the availability of jobs in the area. The greatest concentration of people with limited English skills is in those counties with the greatest Hispanic populations (Lorain, Cuyahoga, and Warren). There also appears to be a correlation with counties having the greatest number of people living below the state’s poverty level and those counties having the greatest minority populations.

**Table 1.1.o**

<b>Region 2 Ethnic Profile</b>		
<b>Population by Race</b>	<b>Number</b>	<b>Percent</b>
<b>Total Population</b>	<b>7,697,425</b>	<b>100.0%</b>
Caucasian	6,873,800	89.3%
African-American	592,701	7.7%
Hispanic	115,461	1.5%
Asian	76,974	1.0%
Native American	15,394	0.2%
Other	23,095	0.3%
<i>Source: Ohio Department of Development</i>		

**Age Profiles**

Region 2 age profiles are similar to those of the other two regions, i.e., median ages are about the same. The largest number of elderly people (65+) and children under 6 years of age coincides with the region’s largest communities (see Table 1.1.p). These two populations warrant special considerations in pre- and post-disaster planning.

**Table 1.1.p**

Region 2 Population by Age								
COUNTY	Population (2000)	Under 6 Years Old	6 to 17 yrs.	18 to 24 yrs.	25 to 44 yrs.	45 to 64 yrs.	65 yrs and more	Median Age
Ashland	52,523	4,174	9,386	5,624	13,865	12,144	7,330	36.3
Ashtabula	102,728	7,831	18,986	7,917	28,714	24,231	15,049	37.6
Butler	332,807	27,809	58,435	39,350	99,695	72,050	35,468	34.2
Cuyahoga	1,393,978	109,351	238,028	110,451	410,675	308,296	217,177	37.3
Delaware	109,989	10,669	20,366	8,337	35,965	25,781	8,871	35.3
Fairfield	122,759	10,415	22,494	9,902	36,992	29,227	13,729	36.2
Franklin	1,068,978	91,743	176,113	124,804	357,916	214,118	104,284	32.5
Geauga	90,895	7,390	18,323	5,966	24,051	24,307	10,858	38.7
Green	147,886	10,495	24,773	20,204	40,256	34,797	17,361	35.6
Hamilton	845,303	68,237	149,904	81,114	251,146	180,887	114,015	35.5
Knox	54,500	4,145	9,390	6,480	14,639	12,332	7,514	36.5
Lake	227,511	16,677	38,301	16,356	68,088	55,996	32,093	38.6
Licking	145,491	12,113	25,737	12,632	42,889	34,805	17,315	36.6
Lorain	284,664	24,179	50,438	24,556	83,636	66,140	35,715	36.5
Mahoning	257,555	18,628	42,263	21,861	68,328	60,719	45,756	39.7
Medina	151,095	12,963	28,516	10,611	46,210	36,900	15,895	36.6
Montgomery	559,062	44,533	93,185	54,245	162,977	127,336	76,786	36.4
Pickaway	52,727	3,763	8,921	4,785	17,260	12,301	5,697	36.0
Portage	152,061	11,214	24,795	21,979	43,651	33,717	16,705	34.4
Richland	128,852	10,010	22,003	10,655	36,862	31,131	18,191	37.7
Stark	378,098	28,668	65,080	31,379	105,259	90,512	57,200	38.2
Summit	542,899	43,099	92,902	44,253	161,502	124,398	76,745	37.2
Trumbull	225,116	16,889	37,849	17,334	61,865	55,860	35,319	39.0
Warren	158,383	14,681	29,218	11,178	54,016	34,357	14,933	35.2
Wayne	111,564	9,467	21,159	10,985	31,135	25,184	13,634	35.4
Totals	7,697,424	619,143	1,326,565	712,958	2,297,592	1,727,526	1,013,640	

*Source: Ohio Department of Development*

**Regional Economy**

Manufacturing is the region’s principal economic sector. Other sectors, in order of economic importance, include (2) state and local government services, (3) health care / social assistance (4) retail trade, and (5) accommodations and food service (see Table 1.1.q).

Region 2 unemployment rates fluctuated between a high of 5.4% in 2002 to a low of 3.7 % in 1998 (see Table 1.1.r). There is a correlation between unemployment rates and the fortunes of the manufacturing sector. Government and health care services have generated a large number of jobs in Region 2, after the manufacturing sector. The median household income in Region 2 is between \$40,000 and \$50,000 a year (see Table 1.1.s).

**Table 1.1.q**

<b>REGION 2 EMPLOYMENT AND WAGES BY SECTOR</b>				
<b>Sector</b>	<b>Average Annual Employment</b>		<b>Total Wages</b>	
	<b>2000</b>	<b>2001</b>	<b>2000</b>	<b>2001</b>
Manufacturing	652,221	606,989	\$28,996,458	\$26,871,639
State / Local Govt. Services	447,267	459,445	\$15,406,840	\$16,291,398
Health Care / Social Assistance	428,338	442,757	\$13,557,070	\$14,505,024
Retail Trade	478,173	468,025	\$10,150,100	\$10,303,520
Accommodations / Food Service	293,794	294,624	\$3,333,391	\$3,437,240

*Source: Ohio Department of Development*

**Table 1.1.r**

<b>Region 2 Unemployment Rate</b>					
<b>Labor Force</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Employed	3,746,700	3,786,800	3,809,400	3,857,200	3,786,500
Unemployed	253,600	257,200	250,800	261,500	317,800
Unemployment Rate	3.7	4.0	3.8	4.1	5.4

*Source: Ohio Department of Development*

**Table 1.1.s**

<b>HOUSEHOLD INCOME IN 1999</b>		
	<b>Number</b>	<b>Percent</b>
Total Households	3,044,182	100%
Less than \$10,000	271,392	8.9
\$10,000 - \$19,999	372,913	12.3
\$20,000 - \$29,999	401,931	13.2
\$30,000 - \$39,999	385,905	12.7
\$40,000 - \$49,999	329,588	10.8
\$50,000 - \$59,999	288,736	9.5
\$60,000 - \$74,999	332,233	10.9
\$75,000 - \$99,999	320,546	10.5
\$100,000 - \$149,999	222,733	7.3
\$150,000 - \$199,999	56,999	0.9
\$200,000 or more	61,236	2

*Source: Ohio Department of Development*

## Housing

About one half of Region 2's housing stock was constructed prior to 1969, when the National Flood Insurance Program was created. This implies that a large number of houses constructed in the region's floodplains do not have adequate flood protection. Most of the homes in Region 2 are owner occupied (62.8%), as opposed to those occupied by renters (30.7%). The number of vacant homes is relatively low (6.5%), but livability of these vacant homes is unknown.

**Table 1.1.t**

<b>Region 2 Housing By Type</b>		
<b>Housing Units</b>	<b>Number</b>	<b>Percent</b>
Total Units	3,255,251	100.0%
Occupied Units	3,043,664	93.5%
Owner Occupied	2,043,508	62.8%
Renter Occupied	1,000,156	30.7%
Vacant Housing Units	211,587	6.5%

*Source: Ohio Department of Development*

**Transportation**

Region 2 has a well-developed transportation system, which includes 6 principal airports and 65 local airports. Geauga and Knox Counties are the only Region 2 counties that do not have interstate highways. All are served by the US Highway system and a variety of rail lines. The region possesses both lake and river port facilities (see Table 1.1.u).

**Table 1.1.u**

<b>REGION 2 TRANSPORTATION SYSTEMS</b>						
<b>County</b>	<b>Interstate Highways (X)</b>	<b>US Hwys (X)</b>	<b>Rail Lines (number)</b>	<b>Principal Airport (number)</b>	<b>Local Airport (number)</b>	<b>Lake/River Ports (number)</b>
Ashland	X	X	3	0	1	0
Ashtabula	X	X	4	0	3	2
Butler	X	X	6	0	3	0
Cuyahoga	X	X	6	1	2	1
Delaware	X	X	3	0	1	0
Fairfield	X	X	0	0	2	0
Franklin	X	X	4	1	5	0
Gauga	0	X	1	0	2	0
Green	X	X	1	0	2	0
Hamilton	X	X	7	1	3	2
Knox	0	X	1	0	2	0
Lake	X	X	2	0	2	1
Licking	X	X	3	0	1	0
Lorain	X	X	4	0	5	1
Mahoning	X	X	4	0	4	0
Medina	X	X	4	0	3	0
Montgomery	X	X	3	1	5	0
Pickaway	X	X	3	0	2	0
Portage	X	X	6	0	5	0
Richland	X	X	3	0	3	0
Stark	X	X	5	1	1	0
Summit	X	X	6	0	3	0
Trumbull	X	X	4	1	2	0
Warren	X	X	1	0	2	0
Wayne	X	X	5	0	1	0

*Sources: Ohio Department of Transportation - Ohio Department of Development*

**REGION 3**

Region 3 is defined largely as the Appalachian region of Ohio. This region consists largely of the Appalachian foothills, and also is the area of the state that has the most exposure to the Ohio River.

**General Population**

The population in Region 3 of 1,455,313, according to the Ohio Department of Development, demonstrated an increase of 82,620 people over a 10-year period (1990-2000). The 6% growth rate exceeds that of Ohio (4%) for the same period. Since 1950 the regional growth has increased steadily (see Table 1.1.v).

The region as a whole has seen an increase in population but some of the region's largest areas have experienced losses in population between 1990 and 2000 (see Table 1.1.w). These areas include Chillicothe (Ross County), Portsmouth (Scioto County), New Philadelphia (Tuscarawas County), Marietta (Washington County), and most notably Steubenville (Jefferson County), which experienced a 16% decrease.

**Table 1.1.v**

<b>Region 3 Populations Trends 1980-2030</b>		
<b>YEAR</b>	<b>POPULATION</b>	<b>% CHANGE 1950-2030</b>
1980	1,376,130	(+) 10.06 %
1990	1,372,893	(-) 0.23%
2000	1,455,313	(+) 5.66 %
2010 (projected)	1,515,136	(+) 3.94 %
2020 (projected)	1,571.19	(+) 3.56 %
2030 (projected)	1,610,301	(+) 2.42 %

*Source: Ohio Department of Development*

**Table 1.1.w**

<b>Region 3: Percent Growth in Large Cities</b>			
<b>LARGEST AREAS</b>	<b>1990</b>	<b>2000</b>	<b>% Change</b>
Union twp., Clermont County	33,368	42,332	21%
Miami twp., Clermont County	28,199	36,632	23%
Zanesville, Muskingum County	26,778	25,586	5%
Chillicothe, Ross County	21,923	21,796	-1%
Athens, Athens County	21,265	21,342	0.03%
Portsmouth, Scioto County	22,676	20,909	-8%
Steubenville, Jefferson County	22,125	19,015	-16%
New Philadelphia, Tuscarawas County	15,698	15,039	-4%
Batavia twp., Clermont County	11,254	15,039	25%
Marietta, Washington County	15,026	14,515	-3%

*Source: Ohio Department of Development*

**Special Populations**

There is a significant part of the population in Region 3 that could require higher levels of assistance before and after a disaster occurs. These special population groups include: infant children, elderly, non-English speaking populations, convalescing populations, assisted living populations, as well as inmates.

***Convalescing and Assisted Living Populations***

The convalescing and assisted living populations include hospitals, nursing homes, and mental institutions. The combined number of nursing homes and hospitals in Region 3 is 169 with a total 16,704 beds. There also are two mental institutions in the region. Although these facilities have their own contingency plans, they coordinate with state, county and city hazard mitigation planning efforts.

***Inmate Populations***

Region 3 also contains 6 prisons, which are divided among Belmont, Hocking, Noble, Ross, and Scioto counties. The inmate population at any point and time could be as high as 10,000. Most notably is Ross County, which contains 2 of the 6 prisons but approximately 48% of the population.

***Ethnic / Poverty Level Considerations***

Approximately 95.9% of the region’s 1,455,313 people are Caucasian. This leaves a total minority population of 64,883; many who may not be fluent in the English language (see Tables 1.1.x). Athens and Coshocton counties have significantly large populations that speak languages other than English in the home (5.4 and 6.7% respectively). By comparison, the average for the State of Ohio is about 6.1 %.

**Table 1.1.x**

<b>REGION 3 ETHNIC PROFILE</b>		
<b>POPULATION BY RACE</b>	<b>NUMBER</b>	<b>PERCENT</b>
<b>Total Population</b>	<b>1,455,313</b>	<b>100%</b>
<b>Total Minority</b>	<b>64,883</b>	<b>0.6</b>
Caucasian	1,396,320	95.9
African-American	29,877	2.1
Hispanic	9,385	0.6
Native American	4,314	0.3
Asian	5,829	0.4
Pacific Islander	276	0
Other	2,955	0.2
Two of More Races	15,745	0.6
<i>Source: Ohio Department of Development</i>		

The African-American (2.1%) and Hispanic (0.6%) populations in Region 3 are comparatively small. The largest percentages of African Americans reside in Noble and Ross counties (6.7% and 6.2%). The majority of Hispanics reside in Athens (1.0%) and Columbiana (6.2%) counties.

Approximately 10.6% of Ohio's populations live below the poverty level. Twenty-six counties within the region are above the state average. In comparison, three of the Region 3 counties have poverty levels less than that of the state average: Clermont: 7.1%, Coshocton: 9.1%, and Tuscarawas: 9.4%. Counties listed as below poverty level face potentially severe implications of ensuring mitigation actions are implemented and often must depend on outside resources.

### ***Age Profiles***

The median age in Region 3 is 35.7 years, which does not vary significantly from that in Region 1 (35.4) or Region 2 (36.4). However, the highest median age for any of Ohio's counties occurs in Region 3 (42 in Jefferson County).

The two populations, which often require special attention during disaster times, are children under 5 and those over 65. At present approximately 7.7% of the region's population is less than 5 years of age (112,477) and 13.7% of the population is 65 or more (198,859). Within the region Columbiana and Clermont counties contain the largest population above 65 years of age. Additionally Clermont County also contains the highest number of minor population under the age of 5.

Table 1.1.y

Region 3 Population by Age						
COUNTY	Population (2000)	Under 5 Years Old	21 yrs. +	65 yrs. +	85 yrs. +	Median Age
Adams	27,330	1,756	19,067	3,643	412	36
Athens	62,223	2,972	40,721	5,793	702	26
Belmont	70,226	3,531	52,526	12,758	1,503	41
Brown	42,285	2,979	29,024	4,914	540	35
Carroll	28,836	1,731	20,578	1,809	398	39
Columbiana	112,075	6,618	80,752	16,843	1,755	38
Clermont	177,977	13,550	121,525	16,747	1,692	35
Coshocton	36,655	2,351	25,608	5,375	579	38
Gallia	31,069	1,963	21,811	4,211	493	37
Guernsey	40,792	2,748	28,569	5,896	678	38
Harrison	15,856	914	11,713	2,804	383	41
Highland	40,875	2,906	28,241	5,649	666	36
Holmes	38,943	4,003	23,233	4,092	546	28
Hocking	28,241	1,879	20,023	3,708	410	38
Jackson	32,641	2,139	22,867	4,439	520	36
Jefferson	73,894	3,860	55,001	13,752	1,516	42
Lawrence	62,319	3,839	44,559	8,966	891	38
Meigs	23,072	1,312	16,625	3,406	386	39
Monroe	15,108	804	11,060	2,467	290	41
Morgan	14,897	903	10,548	2,327	256	39
Muskingham	84,585	5,637	58,767	12,092	1,536	36
Noble	14,058	703	10,229	1,836	227	36
Perry	34,078	2,505	23,095	4,093	434	35
Pike	27,695	1,905	19,054	3,756	467	35
Ross	73,345	4,544	53,040	8,928	984	37
Scioto	79,195	5,025	56,391	11,826	1,409	37
Tuscarawas	90,914	6,002	64,447	13,599	1,686	38
Vinton	12,806	921	8,807	1,551	148	36
Washington	63,251	3,691	45,586	3,925	1,094	39
Region Median						35.7

Source: Ohio Department of Development

## Regional Economy

Region 3 is Ohio's most forested region containing 5,284,888 acres of woodland. The remaining acreage, 9,197,677 acres are committed to urban development. The economic base of Region 3 is deeply rooted in its land use.

Manufacturing was the primary source of regional income in 2000 and 2001, followed by (2) State / Local Government services, (3) Health Care, and (4) Retail Trade, and (5) Accommodations and Food Services. Despite a small down trend in 2001, manufacturing continues to be the principal source of regional employment and income. Of the five economic sectors, Retail Trade has experienced the greatest loss both in terms of work force and income. Approximately half of the jobs lost in manufacturing and retail trade in 2001 were offset by new jobs in State / Local Government, Health Care, and Accommodations / Food Services.

Regional unemployment rates fluctuated between 1998 and 2002, but the rates differed only by a percentage point or less. In 2002, unemployment rates reached a high of 6.3% leaving 42,900 workers in Region 3 without jobs (see Table 1.1.aa).

The state median income for that year was \$40,459 and for the U.S., \$41,994 (see Table 1.1.bb). In 1999, the median household income in Region 3 was \$34,452 that is considerably lower than the state or national median income.

**Table 1.1.z**

<b>REGION 3 EMPLOYMENT AND WAGES BY SECTOR</b>				
<b>Average Annual Employment</b>			<b>Total Wages</b>	
Sector	2000	2001	2000	2001
Manufacturing	96,437	90,446	\$3,319,399	\$3,163,486
State / Local Govt. Services	77,660	78,424	\$2,209,606	\$2,314,425
Health Care / Social Assistance	56,320	58,217	\$1,371,890	\$1,495,107
Retail Trade	67,541	66,372	\$1,158,953	\$1,184,874
Accommodations / Food Services	37,944	37,944	\$350,399	\$357,216

*Source: Ohio Department of Development*

**Table 1.1.aa**

<b>Region 3 Unemployment Rate</b>					
<b>Labor Force</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Employed	628,600	623,100	631,700	640,600	636,200
Unemployed	39,500	41,400	38,200	35,500	42,900
Unemployment Rate	5.9	6.1	5.7	5.2	6.3

*Source: Ohio Department of Development*

**Table 1.1.bb**

<b>HOUSEHOLD INCOME IN 1999</b>		
	<b>Number</b>	<b>Percent</b>
Total Households	556,353	100%
Less than \$10,000	65,740	11.80%
\$10,000 - \$19,999	90,146	16.2
\$20,000 - \$29,999	87,653	15.8
\$30,000 - \$39,999	77,786	14
\$40,000 - \$49,999	63,165	11.4
\$50,000 - \$59,999	50,682	9.1
\$60,000 - \$74,999	50,147	9
\$75,000 - \$99,999	40,477	7.3
\$100,000 - \$149,999	20,641	3.7
\$150,000 - \$199,999	4,627	0.8
\$200,000 or more	5,289	1

*Source: Ohio Department of Development*

## Housing

There were over 612,000 housing units in Region 3 (see Table 1.1.cc). The majority of the homes (68%) are owner-occupied and about 23% are rentals. There were 9% of the region's stocks that were vacant.

According to the Ohio Department of Development, approximately 71% of the region's housing stock was built before 1970, which indicates most construction, occurred prior to the federal floodplain mapping initiative. The structural integrity of the region's housing stock improved with the implementation of the National Flood Insurance Program (NFIP). Communities participating in the NFIP are routinely visited to ensure compliance with building and floodplain management standards, which ensures reduction in the vulnerability to flood related damage.

**Table 1.1.cc**

<b>Region 3 Housing by Type</b>		
<b>Housing Units</b>	<b>Number</b>	<b>Percent</b>
Total Units	612,632	100.00%
Occupied Units	556,263	90.80%
Owner Occupied	414,532	67.70%
Renter Occupied	141,731	23.10%
Vacant Housing Units	56,369	9.20%
<i>Source: Ohio Department of Development</i>		

## Transportation

Table 1.1.dd provides a general overview of Region 3 transportation systems, which include interstate highways, US highways, rail lines, local airports, and river ports. There are no large (i.e., principal) airports in the Region.

Only six of twenty-nine counties are served by the interstate system, but most counties have at least one US highway. A major rail line serves all counties except Noble and eight counties have Ports along the Ohio River. Knowledge of transportation systems provides a basis for regional hazard mitigation and emergency response strategies.

**Table 1.1.dd**

<b>REGION 3 TRANSPORTATION SYSTEMS</b>						
<b>County</b>	<b>Interstate Highways</b>	<b>US Hwys</b>	<b>Rail Line (Number )</b>	<b>Principal Airport (Number)</b>	<b>Local Airport (Number)</b>	<b>Riverports (Number)</b>
Adams		X	1		1	
Athens		X	1		1	
Belmont	I -70	X	1		2	3
Brown		X	1		1	
Carroll		0	2		3	
Columbiana		X	2		2	2
Clermont		X	2		1	
Coshocton		X	1		2	
Gallia		X	2		1	2
Guernsey	I -70; I-77	X	1		1	
Harrison		X	2		1	
Highland		X	1		1	
Holmes		X	1		1	
Hocking		X	1		0	
Jackson		X	1		1	
Jefferson		X	3		2	3
Lawerence		X	2		1	2
Meigs		X	1		0	
Monroe		0	2		1	2
Morgan		0	1		1	
Muskingum	I - 70	X	4		2	
Noble	I - 70	0	0		1	
Perry		X	2		2	
Pike		X	2		1	
Ross		X	3		1	
Scioto		X	2		1	3
Tuscarawas	I - 77	X	3		1	
Vinton		X	1		1	
Washington	I - 77	X	1		0	2

*Source: Ohio Department of Development*